



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director



May 3, 2016

Ms. Shari Kolak
Remedial Project Manager
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Troy Well Field Unknown Source
Remediation Response
Correspondence
Remedial Response
Miami County
555001353004

Subject: Ohio EPA Review Summary of Proposed Remedial Action Objectives For Focused Feasibility Study for East Troy Contaminated Aquifer Site, Troy, Miami County

Dear Ms. Kolak:

On April 20, 2016, the Ohio Environmental Protection Agency (Ohio EPA) Division of Environmental Response and Revitalization, received through electronic mail the Summary of Proposed Remedial Action Objectives (RAOs) for Focused Feasibility Study (FFS) submitted by SulTRAC, on behalf of U.S. EPA, for the East Troy Contaminated Aquifer (ETCA) Superfund Site located in Troy, Miami County, Ohio. Ohio EPA is providing the following comments to assist in the completion of the RAOs.

1. Page 1, soil section:
 - a. Please specify that the soil heading refers to East Water Street only.
 - b. Please also confirm that ground water monitoring will be conducted post soil remedy and provide a scope for that work in future documents.
 - c. Depending on the final site-specific leach-based soil clean up numbers, there may be other exposure units (EUs) that exceed the leaching values and may need to be remediated under the final remedy. Please consider this for future documents to ensure this is documented properly.
2. Page 2, Residential Area PCE Plume Vapor Intrusion:
 - a. Please provide a map to indicate the area to be offered pre-emptive sub-slab depressurization systems. Please also indicate the extent of the buffer area.
 - b. Please provide more information regarding the mentioned separate initiative by EPA to address vapor intrusion in homes and businesses not addressed as part of the interim action. Would structures that deny pre-

emptive mitigation as part of the interim action be eligible for the separate initiative in the future?

3. Soil leaching number calculation:

- a. In general, Ohio EPA requests that justification and references be provided for all of the parameters used in the soil leaching calculations. Some specifics are provided below.
- b. The document provides the calculations used to derive a site-specific soil leaching to ground water number. Of the various input parameters, the fraction of organic carbon (foc) appears to be incorrect. The value of 0.05 or 5 percent is unusually high. Values of 0.2-0.3 percent (foc of 0.002-0.003) are more typical and were used to develop leach-based standards for the State's remedial program. Because the critical soil concentration is directly proportional to the organic carbon content of the soil, the cleanup values computed in the RAOs may be too high by a factor of 20.

To more defensibly compute the leaching number, it is necessary to provide actual data on the organic carbon concentration in the soil at or near the site. The surface layer of soil is often more carbon rich than the underlying soil column; however, it is the carbon concentration along the deep part of the soil column that will determine downward migration of contaminants.

- c. In the soil leaching calculations for tetrachloroethene (PCE) and trichloroethene (TCE), the concentration in water (C_w) ranges from 0.00543-0.00617 mg/L. Please provide an explanation for why the maximum contaminant level of 0.005 mg/L is not being used.
- d. Please provide the specific reference for the soil organic carbon/water partitioning coefficient (K_{OC}). U.S. EPA soil screening guidance (1996, 2002) provides different K_{OC} values. In addition, because of the variability of this number, it may be necessary to include this parameter in a sensitivity analysis.
- e. Please provide justification for the hydraulic conductivity (K) number used in determining the soil leaching number. This is a highly sensitive parameter that may need to be varied in a sensitivity analysis.
- f. The document states that the hydraulic gradient varies between the Hobart and Spinnaker areas. Please provide justification for the use of the same gradient in both areas in the dilution attenuation factor (DAF) calculations.
- g. Please provide more information on why the sensitivity analysis was performed for only the mixing zone and infiltration rate parameters.

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- h. Once the soil leaching numbers are agreed upon, an evaluation is needed for the final remedy for soil in exposure areas 4 and 5 on the Spinnaker property that have the potential to leach to ground water. As noted in previous Ohio EPA correspondence and discussions, these soils should be considered for remediation if they exceed the calculated soil screening levels.
4. Because of the short review time, further discussion is needed on the calculations estimating dissolved mass. Please be prepared to discuss these calculations on the May 5th conference call, Ohio EPA would like to go through these calculations with you to reach a consensus on the inputs.

If you have any questions or would like to meet to discuss the concerns, please contact me at (937) 285-6456 or Madelyn.Adams@epa.ohio.gov.

Sincerely,



Madelyn Adams
Site Coordinator
Division of Environmental Response and Revitalization

MA/tb

ec: Shari Kolak, U.S. EPA
Guy Montfort, SuITRAC
Allison Reed, DDAGW, SWDO
Erin LeGalley, DERR, CO
Tim Christman, DERR, CO